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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,493	01/15/2004	James Urban	DRP1100	7672

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EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,493

Applicant(s)

URBAN ET AL.

Examiner

Andrea M. Valenti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-9, 11-13, 18-26, 31-33, 38, 39, 42-46 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,779,946 to Urriola et al.

Regarding Claim 1, Urriola teaches a structural cell system for supporting hardscape areas that enables tree root growth and accommodates filtering, retention, storage and infiltration of storm water while preventing hardscape damage, comprising; a plurality of structural cells (Urriola Col. 6 line 1) **capable** of being positioned below a hardscape (Urriola Fig. 17-24), the structural cells having openings sized to accept tree roots (Urriola Fig. 20 and element #16); one or more permeable barriers around the structural cells (Urriola #24); water ingress means into the plurality of structural cells; and water egress means from the plurality of structural cells (Urriola Col. 8 line 30-37).

Regarding Claims 22-23, Urriola teaches a multi-layered structural cell system for supporting hardscape areas that enables tree root growth and accommodates filtering, retention, storage and infiltration of storm water while preventing hardscape drainage, comprising; a first layer (Urriola Fig. 20 #1) of structural cells for short-term water

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storage positioned below the hardscape, the first layer of structural cells being **capable** of short term water storage; water ingress means into the first layer; a second layer of structural cells (Urriola Fig. 20 #57 top layer) positioned below the first layer, the second layer of structural cells being **capable** of storing tree-rooting medium supporting the growth of tree roots; a third layer (Urriola Fig. 20 #57 bottom layer) of cell structure positioned below the second layer, the third layer of structural cells being **capable** of long-term water storage; water egress means from the third layer of structural cells; a first permeable barrier separating the first and second layer; a second permeable barrier separating the second and third layers; and each of the layers being in fluid communication with the other layers (Urriola Col. 8 line 58-60).

Regarding Claims 44 and 45, Urriola teaches a method of making an urban tree growth system; comprising; forming an opening in the hardscape at least large enough for a rootball of a tree; positioning a plurality of structural cells in layers around the opening under the hardscape; inserting the rootball in the opening; and filling the opening and some of the structural cells proximate the opening with a tree-rooting medium for supporting tree growth (Urriola Fig. 17 and 18).

Regarding Claims 2 and 26, Urriola teaches the hardscape may be sidewalk, parking or roadway pavement (Urriola Col. 1 line 11).

Regarding Claim 3, Urriola teaches the open structural cells are **capable** of storing water (Urriola Fig. 3 #17).

Regarding Claim 4, Urriola teaches the open structural cells are **capable** of storing low compacting tree-rooting medium (Urriola Abstract line 6 and Col. 6 line 49).

Regarding Claim 5, Urriola teaches the tree-rooting medium is capable of filtering the storm water (Urriola Col. 8 line 62).

Regarding Claim 7, Urriola teaches the structural cells are positioned in two or more layers (Urriola Fig. 13 #36 and Fig. 17).

Regarding Claim 8, Urriola teaches at least one layer includes structural cells filled with water and at least one layer filled with soil (Urriola Fig. 3 #17 and Col. 6 line 48-49).

Regarding Claim 9, Urriola teaches one or more permeable barriers positioned separating the layers (Urriola Col. 8 line 58-60).

Regarding Claim 11, Urriola teaches one or more impermeable barriers positioned between the structural cells and the hardscape (Urriola Col. 8 line 41-42).

Regarding Claim 12, Urriola teaches one or more impermeable barriers positioned between the structural cells and the surrounding soil (Urriola Col. 8 line 58-60).

Regarding Claims 13 and 33, Urriola teaches the structural cells are assemble in a vertical configuration (Urriol Fig. 17).

Regarding Claims 18 and 38, Urriola teaches the water ingress means is through permeable hardscape (Urriola Fig. 20).

Regarding Claims 19 and 39, Urriola teaches water egress means is water infiltration into surrounding soil (Urriola Fig. 20).

Regarding Claims 21, 43 and 46, Urriola inherently teaches a means for flushing the system with water when the area is subjected to heavy rains, hurricanes, etc.

Regarding Claim 24, Urriola teaches the tree-rooting medium is **capable** of filtering the storm water between the first layer and the third layer (Urriola Fig. 27).

Regarding Claim 25, Urriola teaches a barrier positioned between the first layer and the hardscape (Urriola Col. 7 line 23-24).

Regarding Claims 31 and 32, Urriola teaches one or more impermeable barriers positioned between the first layer of structural cells and the hardscape (Urriola Col. 8 line 41-42).

Regarding Claim 42, Urriola inherently teaches one or more weep holes to allow draining (through the pervious geotextile member that surrounds the cells).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 44-46 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,277,274 to Coffman.

Regarding Claim 44, Coffman teaches a method of making an urban tree growth system; comprising; forming an opening in the hardscape at least large enough for a rootball of a tree; positioning a plurality of structural cells in layers around the opening under the hardscape; inserting the rootball in the opening; and filling the opening and some of the structural cells proximate the opening with a tree-rooting medium for supporting tree growth (Coffman Fig. 6).

Regarding Claim 45, Coffman teaches filling some of the structural cells with water wherein the water is in fluid communication with the structural cells with the tree-rooting medium (Coffman Fig. 5).

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Regarding Claim 46, Coffman inherently teaches flushing the system with water when the area is subjected to heavy rains, hurricanes, etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 10, 14-17, 27-30, 34-37, 40, and 41 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent No. 6,779,946 to Urriola et al.

Regarding Claims 14 and 34, Urriola is silent on the structural cells are assemble in a corbel configuration. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention since the modification is merely a change in size via an old and notoriously well-known pattern configuration selected to fit in different space parameters and does not present a patentably distinct limitation.

Regarding Claims 15, 27, and 35, Urriola teaches that the stored water percolates back to the plants, but is silent one or more water wicks. However, it is old and notoriously well-known in the art of plant husbandry to provide wicks as a controlled means of irrigation for healthy plant development. It would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention for controlled irrigation to the plants.

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Regarding Claims 6, 10, and 28-30, Urriola is silent on a soil injection port, a cell inspection port, a flushing clean out port. However, it is old and notoriously well-known in the art of underground systems to provide ports for ease of routine maintenance and access to the system. It would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention with various ports for the advantage of easily monitoring and maintaining the system.

Regarding Claims 16, 17, 36, 37 and 40, Urriola teaches that the water ingress means is through the gutter of a roadway for runoff, but does not explicitly teach that the water ingress means is a storm drain inlet with a filter. However, it would have been obvious to one of ordinary skill in the art to modify the teachings Urriola with the selection of the ingress means as a filtered storm drain since storm drains are old and notoriously well-known means of water runoff collection and would be an efficient means of channeling the water to the system taught by Urriola.

Regarding Claim 41, Urriola teaches that it is known to conduit water flow to various cell layers (Urriola Fig. 25 #69), but is silent on a splitter system allowing some water to pass directly from the first layer to the third layer. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention as an old and notoriously well-known means of controlled water flow in high flow situations to prevent over-saturation.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,428,870; U.S. Patent Pub. No. US 2004/0076473; Japanese Patent JP 04099411A; U.S. Patent Pub. No. US 2001/0045383; U.S. Patent No. 6,569,321; U.S. Patent No. 6,095,718; U.S. Patent No. 4,771,572; U.S. Patent No. 6,540,436; U.S. Patent No. 5,460,867; U.S. Patent Pub. No. US 2002/0179509; U.S. Patent No. 5,322,629; U.S. Patent No. 6,237,283; U.S. Patent No. 5,383,302; U.S. Patent No. 5,810,510; U.S. Patent Pub. No. US 2003/0082359; and Japanese Patent JP 02161008.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the
Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Andrea M. Valenti
Patent Examiner
Art Unit 3643

20 October 2004


Peter M. Poon
Supervisory Patent Examiner
Technology Center 3600